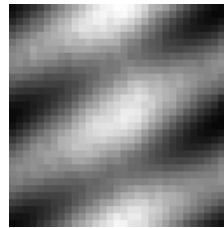
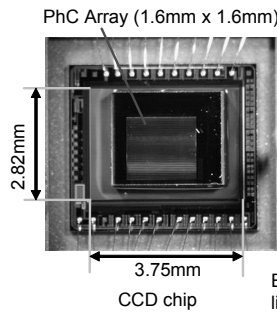
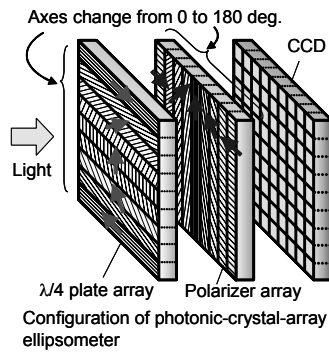


Photonic-Crystal-Array Ellipsometry

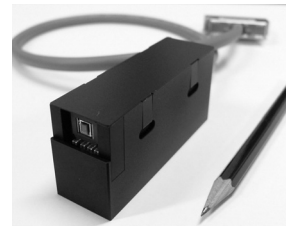
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One of the advantages of surface input/output photonic crystal devices is that parallel complex structures can be easily manufactured. Ellipsometry (or polarimetry) by an array of photonic crystals is an example[1]. In this work, we report direct integration of autocloned photonic crystal chips (one is a waveplate-array and the other a polarizer array) on a CCD chip. High precision is obtained (e.g., rms error=0.08deg for a linearly polarized light). Issues such as speed, further accuracy, extension to multiwavelength operation, etc will be discussed at the meeting.



Example of a 2D image (showing linearly polarized light)



Sensor Module containing a CCD chip and CCD-to-PC interface LSI's.

[1] T. Sato et al, *PNFA*, **2**, 149 (2004) [or Paper Mo-C6, PECS-V].